



Grade Level Texas Essential Knowledge and Skills (TEKS) by Content Area:

Mathematics

Grade 4: 4.13A; B; 4.14A; B; C; D;
4.15A; 4.16A; B

Grade 5: 5.5A; 5.12A; B; C; 5.13A; B; C;
5.14A; B; C; 5.15A; 5.16A; B

Grade 6: 6.1 C; 6.8A; B; 6.9B; 6.10A; B;
C; D; 6.11A; B; C; D; 6.12A; B; 13A; B

Grade 7: 7.2; G; 7.5A; B; 7.8A; B; 7.10A;
B; 7.15A; B; C; D; 7.14A; B; 7.15A; B

Grade 8: 8.4; 8.5A; 8.11A; B; C; 8.12B;
C; 8.13A; B; 8.14A; B; C; D; 8.15A; B;
8.16A; B

Science (Environmental, Ecology) {2009}

Grade 4: 1A; B; 2A; B; C; D; E; F; 3A; D;
4A; B; 7C

Grade 5: 1A; B; 2A; B; C; D; E; F; G; 3A;
4A; B; 9A; C

Grade 6: 1A; B; 2A; B; C; D; E; 3A; 4A;
B

Grade 7: 1A; B; 2A; B; C; D; E; 3A; 4A;
B; 8C; 10B

Grade 8: 1A; B; 2A; B; C; D; E; 3A; 4A;
B; 11C; D

Social Studies {2010}

Grade 4: 9A; B; C; 22A; B; C; D; E; 23A; B

Grade 5: 9A; B; 24B; C; D; 25A; B; C; D;
E; 26A; B

Grade 6: 6A; B; C; 7B; 21A; B; C; D; E;
F; 22A; B; C; D; E; F; 23A; B

Grade 7: 10A; 21A; B; C; D; E; F; G; H;
22A; B; C; D; 23A; B

Grade 8: 11B; 29B; C; 30A; B; C; D;
31A; B

Adopt-A-Beach

Overview

Students adopt a beach (known as the Beach Guardian program) along the Texas shoreline and visit at least once a year (more often if possible) to collect litter and data. Students should then enter their data into a spreadsheet. Students complete a project to further improve their beach.

Please visit texasadoptabeach.org to submit an online application to officially adopt a stretch of beach or mail printed forms to: **Texas General Land Office Adopt-A-Beach Program, P.O. Box 12873, Austin, Texas 78711-2873.**

Objectives

- ✳ Discuss how people can help their community.
- ✳ Reflect on why beaches (or similar grounds) are a special amenity.
- ✳ Collect data on litter, water quality and physical characteristics at a beach.
- ✳ Analyze data for trends and patterns.
- ✳ Create solutions based on identifiable concerns.

Prerequisites

Units 3 and 4

Setting

Indoors/Outdoors

Materials

Cleanup materials are available from the Texas General Land Office Adopt-A-Beach Program. Email beach@glo.texas.gov or call toll free in Texas at 1.877.TXCOAST. Contact your local municipality for water quality testing kits.

- 👜 trash bags
- 👜 gloves
- 👜 data cards (can be found at the end of this lesson)
- 👜 pencils
- 👜 water quality testing kits (optional)

Developmental Modifications

This activity can be modified to be done on school grounds or areas within your community that need special attention.

CAUTION! Young children will need close supervision and should exercise extreme caution with sharp objects. When picking up garbage, always wear gloves.

Background

The Texas General Land Office Adopt-A-Beach Program is a service learning and citizen science program. Through it, groups collect data on litter during a series of, ideally, three visits. They then use the data to create positive change at the beach. Service learning integrates community service into curriculum, and connects schools with agencies and neighborhoods. These experiences build an understanding of a community, enrich learning and help youth develop personally, socially and academically. Service learning incorporates such steps as: research, investigation, analysis, action, reflection, and celebration. The Adopt-A-Beach Program is an easy and fun way for groups to connect with part of the Texas shoreline by cleaning their favorite beach. Adopters generally commit to three visits per year. During the visits, adopters use special forms to collect data on three different aspects of their beach.



Activities

Collecting and Analyzing Data

1. Gather information on the Adopt-A-Beach Program through texasadoptabeach.org and email questions to beach@glo.texas.gov.
2. Select a beach to adopt and send your visit schedule to the Texas General Land Office Adopt-A-Beach Program. You will be sent a participation form to fill out. If your group cannot commit to all three visits, consider asking another group to share the beach visits and data collection.
3. Order or gather the necessary materials and supplies.
4. Pre-visit Reflection: Have the students answer the first set of journal questions.
5. Go to your adopted beach and enter data on the data form.
6. Litter monitor (each visit): At each visit, litter is collected, recorded, and recycled or disposed of properly.
7. Once back from each beach visit, have students answer the second set of journal questions. Provide one copy of this page for each visit. Discuss as a class.
8. Tally all data.
9. Review and analyze the data over the course of your visits, looking for trends and issues on your beach. Graph the data in order to gain a greater understanding of beach garbage issues. Find creative ways to display your data through graphs, posters and presentations. Ideas for ways to help the beach will surface as students analyze their data.

Taking Action

1. Use the information gathered to help create positive change at the beach by asking:
 - ✿ What are some of the problems this beach has?
 - ✿ How could we help solve beach problems?
 - ✿ What solutions do the students come up with for issues they encounter? Solutions may range from educating others within the school about keeping beaches healthy to trying to get additional garbage cans or educational signage at the beach. This could involve educating others, writing a letter with suggested improvements to your municipality or a community leader, or many other positive actions.
2. After two visits, have students complete and share the third journal page. Use this as an opportunity to teach students about choosing projects carefully. Many projects are bigger than groups realize, and fail because of it. Teach students to select a manageable project that they can complete successfully.

The Texas General Land Office values your thoughts and feedback. Please provide information about any oversights, errors or omissions, as well as particular activities that students find interesting. Send comments to the Texas General Land Office Adopt-A-Beach Program at beach@glo.texas.gov.

*Adapted with permission from **Great Lakes in My World**, a lesson plan created by the Alliance for the Great Lakes.*

Texas General Land Office

Adopt-A-Beach Program

Cleanup Data Card

Safety Tips:

- Wear gloves, closed-toe shoes, a hat, and sunscreen.
- Stay away from large barrels and dead animals.
- Stay out of dunes and natural areas.
- Watch out for and do not disturb wildlife.

On the opposite side of this card, please place a tick mark next to the appropriate category for each piece of trash you pick up. By completing this data card, you help us learn more about trash on Texas beaches—its source and composition.

Number of trash bags filled: _____

If you would like to receive Adopt-A-Beach information:

Name _____

Address _____

E-mail Address _____



Texas Adopt-A-Beach Program

P.O. Box 12873

Austin, Texas 78711-2873

1-877-TXCOAST ♦ www.texasadoptabeach.org

Material

Number of Items

Plastic:
(example: UM 1)

Cigarette Butts:

Glass:

Metal:

Paper:

Rubber:

Wood:

Cloth:

Other:

Foreign Items:
(example: bottle from Mexico)

Most Unusual Item(s):

Trashing Texas Beaches Isn't Cool!™

Texas General Land Office • Jerry Patterson, Commissioner

Unit 5 | “Adopt-A-Beach” Journal Pages

PART ONE: PRE-VISIT REFLECTION

Answer the following questions BEFORE your first beach visit.

1. How often do you visit the beach?

2. When you visit the beach, what do you do there?

3. What do you like best about the beach?

4. What factors determine beach conditions?

5. When was the last precipitation (rain, snow, hail) and how might this impact the beach?

6. What ideas do you have for creating positive change at the beach?

7. What are you looking forward to as part of your Adopt-A-Beach cleanup?

Unit 5 | “Adopt-A-Beach” Journal Pages

PART TWO: POST-VISIT REFLECTION

Answer the following questions AFTER your first beach visit.

1. Describe how the beach looked when you arrived.

2. What did you like best about your beach visit?

3. What surprised you about your visit to the beach?

4. What did you learn from the data you collected?

5. What was the most frequently found trash item?

6. How does your data compare to past visits you have made, or to data other groups around the coast have collected?

7. Based on your data, what ideas do you have for creating positive changes at the beach?

Unit 5 | “Adopt-A-Beach” Journal Pages

PART THREE: PROJECT PLANNING

Answer the following questions AFTER AT LEAST TWO visits to the beach. Be prepared to share your answers with the class.

1. What are your favorite ideas to create positive change at the beach?

2. Which one of these ideas would you like to carry out?

3. What resources (time, money, etc.) would be needed to carry out this project?

4. What challenges might you face while working on this project?

5. How will you overcome these challenges?

6. List the first steps you think the class should take to carry out the project.
